

REMARKS

The present application includes claims 1-20. Claims 1-20 were rejected by the Examiner. Claims 1, 5, 11, 12, 14, 17 and 19 have been amended by this response.

By this response, claims 1 5, 11, 12, 14, 17 and 19 have been amended. Claim 1 has been amended to recite that software is provided for installation to a plurality of picture archiving and communication system workstations in response to an error detected at at least one workstation. Thus, the error is detected at one more workstations and software is provided for installation to a plurality of workstations. A web-based server is then directed to simultaneously install the software to the plurality of workstations. The Applicant submits that independent claim 1, as amended, and its dependent claims 2-4 should be allowable.

Claim 5 has been amended to recite that a network connection is established with a web-based server from a remote terminal. Claim 5 has been amended to recite the additional steps of identifying an error occurring at at least one of the plurality of picture archiving and communication system workstations based on an error indicator in data from one or more files from on or more workstations and updating software stored on at least one of the plurality of workstations to correct the error. The Applicant respectfully asserts that these limitations are not found in the proper art, and, thus, amended claim 5 and dependent claims 6-10 should be allowable.

Claim 11 has been amended to recite that the remote first terminal remotely monitors a picture archiving and communication system workstation to generate a remote

signal requesting installation of software in response to an error at the workstation. A web-based server includes an installer for simultaneously installing software to a plurality of workstations in response to the remote signal. The Applicant respectfully submits that claims 11-13, as amended, should be allowable.

Claim 14 has been amended to recite a remote signal from a remote first terminal generated in response to an error occurring at a picture archiving and communication system workstation. A web-based server provides remote identification and correction of an error at at least one of a plurality of picture archiving and communication system workstations by updating software stored on at least one of the plurality of workstations. The Applicant respectfully submits that amended independent claim 14 and its dependent claims 15-16 are allowable.

Claim 17 has been amended to specify that the web-based server is instructed to extract log data from each of a plurality of workstations in communication with the web-based server, wherein the log data indicates an error occurring at the plurality of workstations. The log data is transmitted to a remote terminal for analysis of the error, and the error is remotely corrected at the plurality of workstations from a remote terminal using the web-based server. The Applicant respectfully submits that claims 17-18, as amended, should be in condition for allowance.

Claim 19 has been amended to specify connecting to a web-based server from a remote terminal on the Internet. The web-based server is instructed to update pre-existing software on a plurality of picture archiving and communication workstations in communication with the web-based server. The pre-existing software is simultaneously

updated on the plurality of workstations. The Applicant respectfully submits that amended claims 19-20 should be allowable.

Claims 1-4, 11-13, and 19-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Zur (U.S. Patent No. 6,178,225) in view of Allison (U.S. Patent No. 6,094,531).

Claims 5-8 and 14-18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Zur in view of Cramer (U.S. Patent No. 5,307,354).

Claims 9 and 10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Zur in view of Cramer further in view of Neal (U.S. Patent No. 6,192,518).

The Applicant first turns to the rejection of claims 1-4, 11-13, and 19-20 under 35 U.S.C. § 103(a) as being unpatentable over Zur in view of Allison. Zur relates to metering x-ray image exposures for billing purposes. As shown in Figures 1, 2, and 3 (all of the figures of the Zur patent) and discussed in the background, summary, and detailed description, Zur is concerned with equipment cost and saving money through digital images and rejection of unusable x-ray images (col. 1, lines 10-67 and col. 2, lines 1-65, for example). Zur focuses on local archive storage (local archive 24, col. 4, lines 34-42), rather than a centralized remote data store or a centralized remote data store provided by an application service provider. The local archive may be a PACS (col. 4, lines 34-42).

The service center of Zur preferably receives usage statistics from metering systems of digital X-ray image facilities via the Internet (col. 5, lines 19-29). That is, the

service center is accessed by facilities, and the service center then generates bills based on the image usage statistics received from facility metering systems (col. 5, lines 30-34). Alternatively, Zur mentions that the service center may electronically poll individual imaging facility metering systems to obtain usage statistics (col. 6, lines 42-50).

Thus, Zur is concerned with accurate and efficient billing of users of x-ray imaging facilities based on an actual number of accepted images as opposed to a total number of images taken. Hard copies of x-ray images may then be printed for only the appropriate accepted x-ray images. Time, money, and resources may be saved by accurate metering of images and billing for those images. However, these aims and methods of Zur are quite different from the teachings of the present invention. One of ordinary skill in the art seeking to develop a remote software installation and error correction system would not have looked to Zur's metering and billing system for suggestions.

Allison relates to a test system developed by Hewlett-Packard to help test new software and hardware on a computer testing platform (col. 6, lines 223-33). The system of Allison enables an operating system that is used to run software and/or hardware experimentally on a test computer to be installed on one or more test machines, then wiped from the test machines, and subsequently replaced with a different operating system for further testing (Figures 1, 2, 3, 4, and 5). An appropriate operating system is installed on a machine followed by the software and/or hardware to be tested (col. 4, lines 10-12). After testing has been completed, the operating system is removed so that

another operating system may be installed on the machine for a subsequent test (Figures 4 and 5, col. 10, lines 20-23, col. 12, lines 32-45). In this way, operation of a new piece of software and/or hardware being developed by a company may be tested under a variety of different operating systems. The operating systems are temporarily installed for testing purposes and then replaced.

This system is a test system, configured in an experimental environment by computer software and hardware development companies, such as Hewlett-Packard, to test products before they are released on the marketplace. The test machines are wiped and returned to a "blank" or base state after one test in preparation for another test. One of ordinary skill in the art seeking to develop a remote software installation and error correction system for use with a PACS would not have looked to Allison's testing system for suggestions. In the present invention, PACS workstations store valuable data and records and provide software services to users. A system with variable operating system installation followed by a wiping or resetting of information on that system would not be useful in such an environment.

One of ordinary skill in the art would not have combined the teachings of Zur and Allison in pursuit of the claimed invention. Despite their common use of computer systems, metering and billing systems for X-ray facilities are not related to a personal computer software and hardware test network capable of installing and subsequently clearing a plurality of operating systems on test computers.

Nonetheless, a theoretical combination of these systems would produce either an x-ray testing system or a testing system capable of metering accepted versus rejected tests and billing for such use of the testing network. Neither the individual systems of Zur and Allison nor the combined theoretical testing/billing network would serve as a basis for one of ordinary skill in the art of the present invention at the time the invention was made.

Additionally, neither Zur, Allison, nor their combination would teach or suggest a method for remotely enhancing a picture archiving and communication system (PACS) including establishing a network connection with a web-based server and periodically providing software for installation to a plurality of PACS workstations in response to an error detected at one or more of the workstations. The combination does not teach or suggest directing the web-based server to simultaneously install the software to the plurality of PACS workstations and simultaneously installing the software. Rather, neither Zur nor Allison mentions error detection or such software installation.

Therefore, the Applicant respectfully submits that independent claim 1 and its dependent claims 2-4 should be in condition for allowance.

The combination of Zur and Allison does not teach or suggest a system with a remote first terminal remotely monitoring a PACS workstation to generate a remote signal requesting installation of software in response to an error at the workstation and a web-based server including an installer for simultaneously installing software to a

plurality of PACS workstations responsive to the remote signal. These limitations are recited in claim 11. Rather, Allison installs an operating system in a testing environment in order to test new products. Neither Zur nor Allison discusses errors. Neither Zur nor Allison installs software on a plurality of PACS workstations in response to a remote signal monitoring one PACS workstation. Additionally, for example, the combination does not teach or suggest generating a remote signal at a first PACS workstation for instructing the web-based server to install software at the PACS workstations, as recited in claim 12.

Thus, the Applicant respectfully submits that claims 11-13 should be allowable.

In addition, the combination of Zur and Allison does not teach or suggest connecting to a web-based server from a remote terminal on the Internet, instructing the web-based server to update pre-existing software on a plurality of PACS workstations in communication with the web-based server, and simultaneously updating the pre-existing software on the plurality of PACS workstations. These limitations are recited in independent claim 19. Rather, Allison teaches an operating system replacement on a machine or installation of an operating system on a blank machine for testing. Additionally, there is no update in either Zur or Allison on multiple machines of software that is already on all of the multiple machines.

Therefore, the Applicant respectfully submits that claims 19 and 20 should be allowable.

The Applicant now turns to the Examiner's rejection of claims 5-8 and 14-18 under 35 U.S.C. § 103(a) as being unpatentable over Zur in view of Cramer.

Cramer relates to a remote error recovery system that is capable of remotely rebooting or restarting a computer if an error message is received (Abstract, col. 2, lines 59-65). The remote maintenance and error recovery discussed in Cramer involves remotely resetting an affected machine in order to alleviate the problem. Cramer uses terminate and stay resident (TSR) software to monitor for an error at a computer, such as software freezing on the computer. The affected computer may then be reset or rebooted in response to an error message transmitted by the TSR program.

In Cramer, first, an error or reconfiguration message is received (col. 6, lines 61-68). Then, a token ring TSR monitor application is automatically invoked by returning to an address previously associated with user appendages for error messages (col. 6, line 68 and col. 7, lines 1-5). Then, messages are displayed to the user (col. 7, lines 6-14). In response to the messages, the system of Cramer resets the particular station where the error occurred and re-attaches the station to the network (col. 7, lines 15-26). Thus, Cramer's response to an error message for a station is to reboot the station. Monitor data in Cramer indicating a system reboot differs from the log file of the present invention used to analyze an error in the workstation and correct that error. Cramer does not teach or suggest remote troubleshooting or error analysis and correction, but rather uses a simple reboot and reconnection under the assumption that most system errors are program glitches that will be cured by a restart of the computer. Cramer does not teach

or suggest an analysis to determine an exact location and cause of an error but rather seeks to reset the system in the event of an error in hopes of clearing the error.

One of ordinary skill in the art would have no reason to combine the remote reboot system of Cramer with the metering and billing system of Zur. Combining the systems for the sake of argument would either provide remote reboot capability for the metering and billing system or provide a metering and billing system to charge users for the remote reboot service. Neither combination would teach all of the limitations of amended claims 5-8 and 14-18.

For example, the combination would not teach or suggest identifying an error occurring at one or more PACS workstations based on an error indicator retrieved from one or more files at one or more PACS workstations at a remote terminal in communication with a web-based server. Rather, Cramer monitors for an error at a computer and then simply restarts the computer rather than identifying the error. The combination also would not teach or suggest updating software stored on one or more of the PACS workstations to correct the identified error. Rather, Cramer reboots the affected computer. The above limitations are recited in independent claim 5 of the present application.

Similarly, the combination would not teach or suggest generating a remote signal at a remote terminal in response to an error occurring at a PACS workstation connected to a web-based server, retrieving data from one or more PACS workstations in response to the remote signal, and providing remote identification and correction of an error via

the web-based server at one more PACS workstations by updating software stored on one or more PACS workstations. These limitations are recited in independent claim 14.

The combination would also not teach or suggest the remote analysis of log data from each of a plurality of PACS workstations in communication with a web-based server to indicate an error at the plurality of PACS workstations and remote correction of the error at the plurality of PACS workstations from a remote terminal using the web-based server. These limitations are recited in independent claim 17.

Therefore, the teachings of claims 5-8 and 14-18 would not have been obvious. Thus, the Applicant respectfully submits that claims 5-8 and 14-18, as amended, should be allowable.

Claims 9 and 10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Zur in view of Cramer further in view of Neal (U.S. Patent No. 6,192,518).

Neal distributes software in chunks via electronic mail to laptop computers used remotely by employees out of the office (col. 1, lines 7-61). Neal creates a snapshot of software installation components on a source computer (col. 3, lines 16-31). File images are divided into several small pieces or sub-packages (col. 3, lines 32-35). A snapshot description file is generated that describes the snapshot of the source computer, including file images and sub-packages (col. 3, lines 36-41). Then, the snapshot description file is sent to a remote computer via email (col. 3, lines 42-45).

In Neal, email messages are scanned for snapshot description file messages (col. 3, lines 46-50). The remote computer then compares the description file to the remote computer's software installation components (col. 3, lines 50-60). If any file is missing, the remote computer requests the missing software from the source computer (col. 3, lines 60-63). A request for missing file(s) is emailed to the source computer (col. 3, lines 65-67). The source computer retrieves the requested missing files and emails the missing files in a series of email messages (col. 4, lines 1-7). The remote computer receives the emails and assembles the missing software installation components from the email messages (col. 4, lines 8-11). The source computer's snapshot description file is then compared to the remote computer's software installation components (col. 4, lines 11-14). Based on the comparison, the remote computer brings itself into compliance with the source computer by extracting sub-packages from the source computer (col. 4, lines 14-17).

The snapshot description file may be stored on the remote computer and used by the remote computer to determine changes in the remote computer's software installation components (col. 4, lines 18-24). If components have changed, the remote computer extracts software installation components from sub-packages on the remote computer or later retrieves them from the source computer (col. 4, lines 24-28).

As explained above, a combination of Zur and Cramer does not teach or suggest the limitations of independent claim 5. The addition of Neal would not cure the deficiencies of Zur and Cramer. Furthermore, Neal does not teach or suggest directing a

search of files for a predetermined message to retrieve data from a PACS workstation or directing a search of files for an error indicator to retrieve data from a PACS workstation.

Rather, Neal assembles snapshot files based on subject. Therefore, the Applicant respectfully submits that claims 9 and 10 should be allowable.

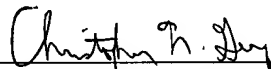
CONCLUSION

The Applicant respectfully submits that the present application is in condition for allowance. The Applicant thanks the Examiner for her work in examining the application and the prior art. If the Examiner has any questions or the Applicants can be of any assistance, the Examiner is invited and encouraged to contact the Applicants at the number below.

The Commissioner is authorized to charge any necessary fees or credit any overpayment to the Deposit Account of GTC, Account No. 070845.

Respectfully submitted,

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